DMX CHART

Martin MAC Viper XIP

Model MAC Viper XIP · Prepared by Krank'd · krankd.com.au

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54ch (Basic) | 48ch (Compact) | 64ch (Extended) | 70ch (Ludicrous)

Basic DMX Mode

54CH (BASIC)	VALUE	FUNCTION
1		**Strobe/shutter**
	000–019	Shutter closed
	020–049	Shutter open
	050–200	Strobe slow → fast
	201–210	Shutter open
	211–255	Random strobe slow → fast
2	000–255	**Dimmer (16-bit coarse)** · Closed → Open
3	000–255	**Dimmer (16-bit fine)** · Fine control (interpolation)
4	000–255	**Cyan (16-bit coarse)** · Intensity 0 → 100%
5	000–255	**Cyan (16-bit fine)** · Fine control (interpolation)
6	000–255	**Magenta (16-bit coarse)** · Intensity 0 → 100%
7	000–255	**Magenta (16-bit fine)** · Fine control (interpolation)
8	000–255	**Yellow (16-bit coarse)** · Intensity 0 → 100%
9	000–255	**Yellow (16-bit fine)** · Fine control (interpolation)
10	000–255	**CTO (16-bit coarse)** · Open (5800 K) → Warm (2850 K)
11	000–255	**CTO (16-bit fine)** · Fine control (interpolation)
12		**CTC (Color Temperature Control)**
	000–037	2000 K
	038–113	2000 K → 5750 K
	114	Open (5800 K)
	115–255	5850 K → 12850 K
13		**Green/Magenta shift (tint)**
	000–126	Shift from Magenta / negative Duv to neutral
	127–128	No shift (native / on black body curve)
	129–255	Shift towards Green / positive Duv
14		**Color wheel**
	000	Open
	001	Slot 1 (Spectral Enhancement)
	002	Slot 2 (CTB)
	003	Slot 3 (Deep Orange)
	004	Slot 4 (Navy Blue)
	005	Slot 5 (Red)
	006–023	No function
	024	Open
	025–040	Open → Slot 1

54CH (BASIC)	VALUE	FUNCTION
	041	Slot 1
	042-057	Slot 1 → Slot 2
	058	Slot 2
	059-074	Slot 2 → Slot 3
	075	Slot 3
	076-091	Slot 3 → Slot 4
	092	Slot 4
	093-108	Slot 4 → Slot 5
	109	Slot 5
	110-125	Slot 5 → Open
	126	Open
	127	No function
	128-137	Shake around Open 360° → 10°
	138-147	Shake around Slot 1 360° → 10°
	148-157	Shake around Slot 2 360° → 10°
	158-167	Shake around Slot 3 360° → 10°
	168-177	Shake around Slot 4 360° → 10°
	178-187	Shake around Slot 5 360° → 10°
	188-191	No function
	192-214	CW rotation fast → slow
	215-216	Stop (wheel stops at current position)
	217-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected color)
	241-255	Random color slow → fast
15		**Gobo wheel 1 gobo selection**
	000	Open
	001	Slot 1 (Time Ripples)
	002	Slot 2 (Look Sharper)
	003	Slot 3 (Compass)
	004	Slot 4 (Deep Space)
	005	Slot 5 (Radar)
	006	Slot 6 (Short Cuts)
	007	Slot 7 (A Lot of Spot)
	008-127	No function
	128-136	Shake slot 1 360° → 10°
	137-145	Shake slot 2 360° → 10°
	146-154	Shake slot 3 360° → 10°
	155-163	Shake slot 4 360° → 10°
	164-172	Shake slot 5 360° → 10°
	173-181	Shake slot 6 360° → 10°
	182-190	Shake slot 7 360° → 10°

54CH (BASIC)	VALUE	FUNCTION
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
16		**Gobo wheel 1 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
17	000-255	**Gobo wheel 1 indexing/rotation (16-bit fine)** · Fine control (interpolation)
18		**Gobo wheel 2 gobo selection**
	000	Open
	001	Slot 1 (String Theory)
	002	Slot 2 (Hazey Waves)
	003	Slot 3 (Limbo)
	004	Slot 4 (Up Is Down)
	005	Slot 5 (Brush Up)
	006	Slot 6 (Sponge)
	007	Slot 7 (All Wrapped Up)
	008-127	No function
	128-136	Shake slot 1 360° → 10°
	137-145	Shake slot 2 360° → 10°
	146-154	Shake slot 3 360° → 10°
	155-163	Shake slot 4 360° → 10°
	164-172	Shake slot 5 360° → 10°
	173-181	Shake slot 6 360° → 10°
	182-190	Shake slot 7 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
19		**Gobo wheel 2 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)

54CH (BASIC)	VALUE	FUNCTION
	193-255	CCW rotation slow → fast
20	000-255	**Gobo wheel 2 indexing/rotation (16-bit fine)** · Fine control (interpolation)
21		**Animation wheel insertion**
	000	Open
	001	Horizontal pattern
	002	Diagonal pattern
	003	Vertical pattern
	004-023	No function
	024	Open
	025-074	Wheel insertion
	075	Horizontal pattern
	076-126	Diagonal patterns
	127	Vertical pattern
	128-148	Horizontal pattern shake slow → fast
	149-169	Diagonal pattern shake slow → fast
	170-190	Vertical pattern shake slow → fast
	191	No function
	192	Stop (wheel stops at current position)
	193-239	Bounce between horizontal and vertical slow → fast
	240	Stop (wheel stops at current pattern)
	241-255	Random patterns between horizontal and vertical slow → fast
22		**Animation wheel indexing/rotation (16-bit coarse)**
	000-063	Wheel indexing -180° → 0°
	064	Wheel indexed at 0°
	065-127	Wheel indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (wheel stops at current position)
	193-255	CCW rotation slow → fast
23	000-255	**Animation wheel indexing/rotation (16-bit fine)** · Fine control (interpolation)
24	000-255	**Light Frost (Frost 1)** · No frost → full frost
25	000-255	**Heavy Frost (Frost 2)** · No frost → full frost
26		**Prism selection**
	000	Open
	001	Prism 1
	002-127	No function
	128-191	Shake prism slow → fast
	192-255	No function
27		**Prism indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Prism indexed at 0°
	065-127	Indexing 0° → +180°

54CH (BASIC)	VALUE	FUNCTION
	128-191	CW rotation fast → slow
	192	Stop (prism stops at current position)
	193-255	CCW rotation slow → fast
28	000-255	**Prism indexing/rotation (16-bit fine)** · Fine control (interpolation)
29		**Iris**
	000-191	Open → closed
	192	Stop (iris stops at current position)
	193-223	Opening pulse slow → fast
	224	Stop (iris stops at current position)
	225-255	Closing pulse slow → fast
30	000-255	**Zoom (16-bit coarse)** · Wide → narrow
31	000-255	**Zoom (16-bit fine)** · Fine control (interpolation)
32	000-255	**Focus (16-bit coarse)** · Infinity → near
33	000-255	**Focus (16-bit fine)** · Fine control (interpolation)
34	000-255	**Framing blade 1 position** · Out → in
35		**Framing blade 1 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
36	000-255	**Framing blade 2 position** · Out → in
37		**Framing blade 2 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
38	000-255	**Framing blade 3 position** · Out → in
39		**Framing blade 3 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
40	000-255	**Framing blade 4 position** · Out → in
41		**Framing blade 4 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
42		**Framing rotation**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
43	000-255	**Pan (16-bit coarse)** · Left → right
44	000-255	**Pan (16-bit fine)** · Fine control (interpolation)

54CH (BASIC)	VALUE	FUNCTION
45	000-255	**Tilt (16-bit coarse)** · Forward → backward
46	000-255	**Tilt (16-bit fine)** · Fine control (interpolation)
47		**Fixture Control/Settings**
	000-009	No function
	010-014	Reset fixture (5 sec.)
	015	No function
	016	Reset color (5 sec.)
	017	Reset beam (5 sec.)
	018	Reset pan and tilt (5 sec.)
	019-022	No function
	023	Linear dimmer curve (1 sec.)
	024	Square law dimmer curve (default, 1 sec.)
	025	Inverse square law dimmer curve (1 sec.)
	026	S-Curve dimmer curve (1 sec.)
	027	Pan and tilt speed = Standard (default, 1 sec.)
	028	Pan and tilt speed = Fast (1 sec.)
	029	Pan and tilt speed = Smooth (1 sec.)
	030	Effect shortcuts = ON (default, 1 sec.)
	031	Effect shortcuts = OFF (1 sec.)
	032	Disable focus tracking (1 sec.)
	033	Enable focus tracking at near distance (1 sec.)
	034	Enable focus tracking at medium distance (default, 1 sec.)
	035	Enable focus tracking at far distance (1 sec.)
	036	Enable video tracking (1 sec.)
	037	Disable video tracking (default, 1 sec.)
	038	Extended gamut mode (1 sec.)
	039	Calibrated color mode (1 sec.)
	040	Direct color mode (default, 1 sec.)
	041-051	No function
	052	Control panel display = ON (default, 1 sec.)
	053	Control panel display = OFF
	054	Regulated fan speed, fixed light output intensity (default, 1 sec.)
	055	Full fan speed, regulated light output intensity (1 sec.)
	056	Medium fan speed, regulated light output intensity (1 sec.)
	057	Low fan speed, regulated light output intensity (1 sec.)
	058	Ultra-low fan speed, regulated light output intensity (1 sec.)
	059-060	No function
	061	Hibernation = ON (1 sec.)
	062	Hibernation = OFF (default, 1 sec.)
	063	Followspot = ON (1 sec.)
	064	Followspot = OFF (default, 1 sec.)

54CH (BASIC)	VALUE	FUNCTION
	065	Pan tilt limit = ON (1 sec.)
	066	Pan tilt limit = OFF (default, 1 sec.)
	067	Store lower pan limit (1 sec.)
	068	Store upper pan limit (1 sec.)
	069	Store lower tilt limit (1 sec.)
	070	Store upper tilt limit (1 sec.)
	071	Reset pan tilt limits (1 sec.)
	072	Tungsten emulation = ON (1 sec.)
	073	Tungsten emulation = OFF (default, 1 sec.)
	074	Stand-alone: Record current look (5 sec.)
	075	Offline mode = Run stand-alone show (5 sec.)
	076	Offline mode = Hold last look (default, 5 sec.)
	077-078	No function
	079	Enable gobo CT correction (default, 1 sec.)
	080	Disable gobo CT correction (1 sec.)
	081-083	No function
	084	Studio mode 2 (1 sec.)
	085	Studio mode 1 (1 sec.)
	086	Studio mode = OFF (default, 1 sec.)
	087	Disable keylight calibration (1 sec.)
	088	Keylight calibration manual (1 sec.)
	089	Keylight calibration automatic (default, 1 sec.)
	090-093	No function
	094	Standard framing mode
	095	Legacy framing mode
	096-099	No function
	100	Enable calibration (5 sec.)
	101	Store pan and tilt calibration (5 sec.)
	102	No function
	103	Store Cyan calibration (5 sec.)
	104	Store Magenta calibration (5 sec.)
	105	Store Yellow calibration (5 sec.)
	106	Store CTO calibration (5 sec.)
	107	Store all CMYC calibration (5 sec.)
	108	Store Rotating Gobo 1 / Current slot index calibration (5 sec.)
	109	Store Rotating Gobo 2 / Current slot index calibration (5 sec.)
	110	No function
	111	Store beam effect/framing calibration (5 sec.)
	112	Store iris calibration (5 sec.)
	113	Store focus calibration (5 sec.)
	114	Store zoom calibration (5 sec.)

54CH (BASIC)	VALUE	FUNCTION
	115	Store color wheel calibration (5 sec.)
	116-191	No function
	192	Start CTB filter keylight calibration (5 sec.)
	193	Store CTB filter keylight calibration (5 sec.)
	194	Start CTO flag keylight calibration (5 sec.)
	195	Start Spectral Enhancement filter keylight calibration (5 sec.)
	196	Store CTO flag keylight calibration (5 sec.)
	197	Store Spectral Enhancement filter keylight calibration (5 sec.)
	198	Store all calibration values except keylight calibration (5 sec.)
	199	Reset all calibration values to factory default (excluding keylight calibration, CTC and Tint, 5 sec.)
	200-209	No function
	210	Outdoor: Stop actions and return to normal operation
	211	No function
	212	Outdoor: Run drying off procedure (1 sec., stops when sequence is complete, or stop by sending value 210)
	213	Outdoor: Head goes immediately to safe parking position (1 sec., return to normal operation by sending value 210)
	214-255	No function
48		**LED Frequency**
	000	Hybrid dimming
	001-127	Variable -2% → 0%
	128	2400 Hz
	129-254	Variable 0% → +2%
	255	No function
49		**P3 Mix**
	000-026	DMX Mode: Intensity and colors fully controlled by DMX, P3 pixel data ignored
	027-228	Mixed Mode: crossfade from DMX control of intensity and colors to P3 control of intensity and colors (at 27 fully DMX; at 228 the intensity of each of the 6 x Animotion segments is controlled by 6 x separate P3 pixels and color is controlled using the average color of the six P3 pixels)
	229-255	Video Mode: intensity of 6 x Animotion segments controlled by 6 x P3 pixels, color controlled by DMX (DMX channels 'color' the P3 pixel data)
50		**FX 1 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash

54CH (BASIC)	VALUE	FUNCTION
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps

54CH (BASIC)	VALUE	FUNCTION
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist

54CH (BASIC)	VALUE	FUNCTION
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	No function (FX160 is FX2 Select only)
	161	Vertical Bar Slim
	162	Vertical Bar Medium
	163	Vertical Bar Large
	164	Horizontal Bar Slim
	165	Horizontal Bar Medium
	166	Horizontal Bar Large
	167	Small Square
	168	Medium Square
	169	Large Square
	170	Small Horizontal Rectangle
	171	Medium Horizontal Rectangle
	172	Large Horizontal Rectangle
	173	Small Vertical Rectangle
	174	Medium Vertical Rectangle
	175	Large Vertical Rectangle
	176	Small Parallelogram Left
	177	Medium Parallelogram Left
	178	Small Parallelogram Right
	179	Medium Parallelogram Right
	180	Vertical Bar Slim to Horizontal Bar Slim
	181	Vertical Bar Medium to Horizontal Bar Medium
	182	Vertical Bar Large to Horizontal Bar Large
	183	Vertical Bar Slim to Medium Square
	184	Vertical Bar Medium to Medium Square
	185	Horizontal Bar Slim to Medium Square
	186	Horizontal Bar Medium to Medium Square
	187	Medium Square to Medium Horizontal Rectangle
	188	Medium Square to Medium Vertical Rectangle
	189	Medium Square to Large Horizontal Rectangle
	190	Medium Square to Large Vertical Rectangle
	191	Small Square to Small Parallelogram Left
	192	Medium Square to Medium Parallelogram Left
	193	Small Square to Small Parallelogram Right
	194	Medium Square to Medium Parallelogram Right
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium

54CH (BASIC)	VALUE	FUNCTION
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function
51		**FX 1 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
52		**FX 2 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step

54CH (BASIC)	VALUE	FUNCTION
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)

54CH (BASIC)	VALUE	FUNCTION
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	Enables y-axis selection for FX 167-194 (changes function of the adjacent FX2 Adjust channel)
	161-194	No function (FX 161-194 are FX1 Select only)
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large

54CH (BASIC)	VALUE	FUNCTION
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function
53		**FX 2 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
54		**FX Synchronization**
	000	No sync
	001-035	Fixture offset (shift 10° → 350°)
	036	Synchronized
	037-100	No function
	101-120	Random start (FX1 adjust channel controls overall speed)
	121-140	Random duration
	141-255	No function

Compact DMX Mode

48CH (COMPACT)	VALUE	FUNCTION
1		**Strobe/shutter**
	000-019	Shutter closed
	020-049	Shutter open
	050-200	Strobe slow → fast
	201-210	Shutter open
	211-255	Random strobe slow → fast
2	000-255	**Dimmer (16-bit coarse)** · Closed → Open
3	000-255	**Dimmer (16-bit fine)** · Fine control (interpolation)
4	000-255	**Cyan (16-bit coarse)** · Intensity 0 → 100%
5	000-255	**Cyan (16-bit fine)** · Fine control (interpolation)
6	000-255	**Magenta (16-bit coarse)** · Intensity 0 → 100%
7	000-255	**Magenta (16-bit fine)** · Fine control (interpolation)
8	000-255	**Yellow (16-bit coarse)** · Intensity 0 → 100%
9	000-255	**Yellow (16-bit fine)** · Fine control (interpolation)
10	000-255	**CTO (16-bit coarse)** · Open (5800 K) → Warm (2850 K)
11	000-255	**CTO (16-bit fine)** · Fine control (interpolation)
12		**CTC (Color Temperature Control)**
	000-037	2000 K
	038-113	2000 K → 5750 K
	114	Open (5800 K)
	115-255	5850 K → 12850 K

48CH (COMPACT)	VALUE	FUNCTION
13		**Green/Magenta shift (tint)**
	000-126	Shift from Magenta / negative Duv to neutral
	127-128	No shift (native / on black body curve)
	129-255	Shift towards Green / positive Duv
14		**Color wheel**
	000	Open
	001	Slot 1 (Spectral Enhancement)
	002	Slot 2 (CTB)
	003	Slot 3 (Deep Orange)
	004	Slot 4 (Navy Blue)
	005	Slot 5 (Red)
	006-023	No function
	024	Open
	025-040	Open → Slot 1
	041	Slot 1
	042-057	Slot 1 → Slot 2
	058	Slot 2
	059-074	Slot 2 → Slot 3
	075	Slot 3
	076-091	Slot 3 → Slot 4
	092	Slot 4
	093-108	Slot 4 → Slot 5
	109	Slot 5
	110-125	Slot 5 → Open
	126	Open
	127	No function
	128-137	Shake around Open 360° → 10°
	138-147	Shake around Slot 1 360° → 10°
	148-157	Shake around Slot 2 360° → 10°
	158-167	Shake around Slot 3 360° → 10°
	168-177	Shake around Slot 4 360° → 10°
	178-187	Shake around Slot 5 360° → 10°
	188-191	No function
	192-214	CW rotation fast → slow
	215-216	Stop (wheel stops at current position)
	217-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected color)
	241-255	Random color slow → fast
15		**Gobo wheel 1 gobo selection**
	000	Open
	001	Slot 1 (Time Ripples)

48CH (COMPACT)	VALUE	FUNCTION
	002	Slot 2 (Look Sharper)
	003	Slot 3 (Compass)
	004	Slot 4 (Deep Space)
	005	Slot 5 (Radar)
	006	Slot 6 (Short Cuts)
	007	Slot 7 (A Lot of Spot)
	008-127	No function
	128-136	Shake slot 1 360° → 10°
	137-145	Shake slot 2 360° → 10°
	146-154	Shake slot 3 360° → 10°
	155-163	Shake slot 4 360° → 10°
	164-172	Shake slot 5 360° → 10°
	173-181	Shake slot 6 360° → 10°
	182-190	Shake slot 7 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
16		**Gobo wheel 1 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
17	000-255	**Gobo wheel 1 indexing/rotation (16-bit fine)** · Fine control (interpolation)
18		**Gobo wheel 2 gobo selection**
	000	Open
	001	Slot 1 (String Theory)
	002	Slot 2 (Hazey Waves)
	003	Slot 3 (Limbo)
	004	Slot 4 (Up Is Down)
	005	Slot 5 (Brush Up)
	006	Slot 6 (Sponge)
	007	Slot 7 (All Wrapped Up)
	008-127	No function
	128-136	Shake slot 1 360° → 10°
	137-145	Shake slot 2 360° → 10°
	146-154	Shake slot 3 360° → 10°
	155-163	Shake slot 4 360° → 10°

48CH (COMPACT)	VALUE	FUNCTION
	164-172	Shake slot 5 360° → 10°
	173-181	Shake slot 6 360° → 10°
	182-190	Shake slot 7 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
19		**Gobo wheel 2 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
20	000-255	**Gobo wheel 2 indexing/rotation (16-bit fine)** · Fine control (interpolation)
21		**Animation wheel insertion**
	000	Open
	001	Horizontal pattern
	002	Diagonal pattern
	003	Vertical pattern
	004-023	No function
	024	Open
	025-074	Wheel insertion
	075	Horizontal pattern
	076-126	Diagonal patterns
	127	Vertical pattern
	128-148	Horizontal pattern shake slow → fast
	149-169	Diagonal pattern shake slow → fast
	170-190	Vertical pattern shake slow → fast
	191	No function
	192	Stop (wheel stops at current position)
	193-239	Bounce between horizontal and vertical slow → fast
	240	Stop (wheel stops at current pattern)
	241-255	Random patterns between horizontal and vertical slow → fast
22		**Animation wheel indexing/rotation (16-bit coarse)**
	000-063	Wheel indexing -180° → 0°
	064	Wheel indexed at 0°
	065-127	Wheel indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (wheel stops at current position)

48CH (COMPACT)	VALUE	FUNCTION
	193-255	CCW rotation slow → fast
23	000-255	**Animation wheel indexing/rotation (16-bit fine)** · Fine control (interpolation)
24	000-255	**Light Frost (Frost 1)** · No frost → full frost
25	000-255	**Heavy Frost (Frost 2)** · No frost → full frost
26		**Prism selection**
	000	Open
	001	Prism 1
	002-127	No function
	128-191	Shake prism slow → fast
	192-255	No function
27		**Prism indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Prism indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (prism stops at current position)
	193-255	CCW rotation slow → fast
28	000-255	**Prism indexing/rotation (16-bit fine)** · Fine control (interpolation)
29		**Iris**
	000-191	Open → closed
	192	Stop (iris stops at current position)
	193-223	Opening pulse slow → fast
	224	Stop (iris stops at current position)
	225-255	Closing pulse slow → fast
30	000-255	**Zoom (16-bit coarse)** · Wide → narrow
31	000-255	**Zoom (16-bit fine)** · Fine control (interpolation)
32	000-255	**Focus (16-bit coarse)** · Infinity → near
33	000-255	**Focus (16-bit fine)** · Fine control (interpolation)
34	000-255	**Framing blade 1 position** · Out → in
35		**Framing blade 1 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
36	000-255	**Framing blade 2 position** · Out → in
37		**Framing blade 2 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
38	000-255	**Framing blade 3 position** · Out → in
39		**Framing blade 3 angle**

48CH (COMPACT)	VALUE	FUNCTION
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
40	000-255	**Framing blade 4 position** · Out → in
41		**Framing blade 4 angle**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
42		**Framing rotation**
	000-126	Minimum
	127-128	Parallel
	129-255	Maximum
43	000-255	**Pan (16-bit coarse)** · Left → right
44	000-255	**Pan (16-bit fine)** · Fine control (interpolation)
45	000-255	**Tilt (16-bit coarse)** · Forward → backward
46	000-255	**Tilt (16-bit fine)** · Fine control (interpolation)
47		**Fixture Control/Settings**
	000-009	No function
	010-014	Reset fixture (5 sec.)
	015	No function
	016	Reset color (5 sec.)
	017	Reset beam (5 sec.)
	018	Reset pan and tilt (5 sec.)
	019-022	No function
	023	Linear dimmer curve (1 sec.)
	024	Square law dimmer curve (default, 1 sec.)
	025	Inverse square law dimmer curve (1 sec.)
	026	S-Curve dimmer curve (1 sec.)
	027	Pan and tilt speed = Standard (default, 1 sec.)
	028	Pan and tilt speed = Fast (1 sec.)
	029	Pan and tilt speed = Smooth (1 sec.)
	030	Effect shortcuts = ON (default, 1 sec.)
	031	Effect shortcuts = OFF (1 sec.)
	032	Disable focus tracking (1 sec.)
	033	Enable focus tracking at near distance (1 sec.)
	034	Enable focus tracking at medium distance (default, 1 sec.)
	035	Enable focus tracking at far distance (1 sec.)
	036	Enable video tracking (1 sec.)
	037	Disable video tracking (default, 1 sec.)
	038	Extended gamut mode (1 sec.)
	039	Calibrated color mode (1 sec.)

48CH (COMPACT)	VALUE	FUNCTION
	040	Direct color mode (default, 1 sec.)
	041-051	No function
	052	Control panel display = ON (default, 1 sec.)
	053	Control panel display = OFF
	054	Regulated fan speed, fixed light output intensity (default, 1 sec.)
	055	Full fan speed, regulated light output intensity (1 sec.)
	056	Medium fan speed, regulated light output intensity (1 sec.)
	057	Low fan speed, regulated light output intensity (1 sec.)
	058	Ultra-low fan speed, regulated light output intensity (1 sec.)
	059-060	No function
	061	Hibernation = ON (1 sec.)
	062	Hibernation = OFF (default, 1 sec.)
	063	Followspot = ON (1 sec.)
	064	Followspot = OFF (default, 1 sec.)
	065	Pan tilt limit = ON (1 sec.)
	066	Pan tilt limit = OFF (default, 1 sec.)
	067	Store lower pan limit (1 sec.)
	068	Store upper pan limit (1 sec.)
	069	Store lower tilt limit (1 sec.)
	070	Store upper tilt limit (1 sec.)
	071	Reset pan tilt limits (1 sec.)
	072	Tungsten emulation = ON (1 sec.)
	073	Tungsten emulation = OFF (default, 1 sec.)
	074	Stand-alone: Record current look (5 sec.)
	075	Offline mode = Run stand-alone show (5 sec.)
	076	Offline mode = Hold last look (default, 5 sec.)
	077-078	No function
	079	Enable gobo CT correction (default, 1 sec.)
	080	Disable gobo CT correction (1 sec.)
	081-083	No function
	084	Studio mode 2 (1 sec.)
	085	Studio mode 1 (1 sec.)
	086	Studio mode = OFF (default, 1 sec.)
	087	Disable keylight calibration (1 sec.)
	088	Keylight calibration manual (1 sec.)
	089	Keylight calibration automatic (default, 1 sec.)
	090-093	No function
	094	Standard framing mode
	095	Legacy framing mode
	096-099	No function
	100	Enable calibration (5 sec.)

48CH (COMPACT)	VALUE	FUNCTION
	101	Store pan and tilt calibration (5 sec.)
	102	No function
	103	Store Cyan calibration (5 sec.)
	104	Store Magenta calibration (5 sec.)
	105	Store Yellow calibration (5 sec.)
	106	Store CTO calibration (5 sec.)
	107	Store all CMYC calibration (5 sec.)
	108	Store Rotating Gobo 1 / Current slot index calibration (5 sec.)
	109	Store Rotating Gobo 2 / Current slot index calibration (5 sec.)
	110	No function
	111	Store beam effect/framing calibration (5 sec.)
	112	Store iris calibration (5 sec.)
	113	Store focus calibration (5 sec.)
	114	Store zoom calibration (5 sec.)
	115	Store color wheel calibration (5 sec.)
	116-191	No function
	192	Start CTB filter keylight calibration (5 sec.)
	193	Store CTB filter keylight calibration (5 sec.)
	194	Start CTO flag keylight calibration (5 sec.)
	195	Start Spectral Enhancement filter keylight calibration (5 sec.)
	196	Store CTO flag keylight calibration (5 sec.)
	197	Store Spectral Enhancement filter keylight calibration (5 sec.)
	198	Store all calibration values except keylight calibration (5 sec.)
	199	Reset all calibration values to factory default (excluding keylight calibration, CTC and Tint, 5 sec.)
	200-209	No function
	210	Outdoor: Stop actions and return to normal operation
	211	No function
	212	Outdoor: Run drying off procedure (1 sec., stops when sequence is complete, or stop by sending value 210)
	213	Outdoor: Head goes immediately to safe parking position (1 sec., return to normal operation by sending value 210)
	214-255	No function
48		**LED Frequency**
	000	Hybrid dimming
	001-127	Variable -2% → 0%
	128	2400 Hz
	129-254	Variable 0% → +2%
	255	No function

Extended DMX Mode

64CH (EXTENDED)	VALUE	FUNCTION
1		**Strobe/shutter**

64CH (EXTENDED)	VALUE	FUNCTION
	000-019	Shutter closed
	020-049	Shutter open
	050-200	Strobe slow → fast
	201-210	Shutter open
	211-255	Random strobe slow → fast
2	000-255	**Dimmer (16-bit coarse)** · Closed → Open
3	000-255	**Dimmer (16-bit fine)** · Fine control (interpolation)
4	000-255	**Cyan (16-bit coarse)** · Intensity 0 → 100%
5	000-255	**Cyan (16-bit fine)** · Fine control (interpolation)
6	000-255	**Magenta (16-bit coarse)** · Intensity 0 → 100%
7	000-255	**Magenta (16-bit fine)** · Fine control (interpolation)
8	000-255	**Yellow (16-bit coarse)** · Intensity 0 → 100%
9	000-255	**Yellow (16-bit fine)** · Fine control (interpolation)
10	000-255	**CTO (16-bit coarse)** · Open (5800 K) → Warm (2850 K)
11	000-255	**CTO (16-bit fine)** · Fine control (interpolation)
12		**CTC (Color Temperature Control)**
	000-037	2000 K
	038-113	2000 K → 5750 K
	114	Open (5800 K)
	115-255	5850 K → 12850 K
13		**Green/Magenta shift (tint)**
	000-126	Shift from Magenta / negative Duv to no shift
	127-128	No shift (native / on black body curve)
	129-255	Shift towards Green / positive Duv
14		**Color wheel**
	000	Open
	001	Slot 1 (Spectral Enhancement)
	002	Slot 2 (CTB)
	003	Slot 3 (Deep Orange)
	004	Slot 4 (Navy Blue)
	005	Slot 5 (Red)
	006-023	No function
	024	Open
	025-040	Open → Slot 1
	041	Slot 1
	042-057	Slot 1 → Slot 2
	058	Slot 2
	059-074	Slot 2 → Slot 3
	075	Slot 3
	076-091	Slot 3 → Slot 4

64CH (EXTENDED)	VALUE	FUNCTION
	092	Slot 4
	093-108	Slot 4 → Slot 5
	109	Slot 5
	110-125	Slot 5 → Open
	126	Open
	127	No function
	128-137	Shake around Open 360° → 10°
	138-147	Shake around Slot 1 360° → 10°
	148-157	Shake around Slot 2 360° → 10°
	158-167	Shake around Slot 3 360° → 10°
	168-177	Shake around Slot 4 360° → 10°
	178-187	Shake around Slot 5 360° → 10°
	188-191	No function
	192-214	CW rotation fast → slow
	215-216	Stop (wheel stops at current position)
	217-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected color)
	241-255	Random color slow → fast
15		**Gobo wheel 1 gobo selection**
	000	Open
	001	Gobo 1 (Time Ripples)
	002	Gobo 2 (Look Sharper)
	003	Gobo 3 (Compass)
	004	Gobo 4 (Deep Space)
	005	Gobo 5 (Radar)
	006	Gobo 6 (Short Cuts)
	007	Gobo 7 (A Lot of Spot)
	008-127	No function
	128-136	Shake Gobo 1, 360° → 10°
	137-145	Shake Gobo 2, 360° → 10°
	146-154	Shake Gobo 3, 360° → 10°
	155-163	Shake Gobo 4, 360° → 10°
	164-172	Shake Gobo 5, 360° → 10°
	173-181	Shake Gobo 6, 360° → 10°
	182-190	Shake Gobo 7, 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
16		**Gobo wheel 1 indexing/rotation (16-bit coarse)**

64CH (EXTENDED)	VALUE	FUNCTION
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
17	000-255	**Gobo wheel 1 indexing/rotation (16-bit fine)** · Fine control (interpolation)
18		**Gobo wheel 2 gobo selection**
	000	Open
	001	Gobo 1 (String Theory)
	002	Gobo 2 (Hazey Waves)
	003	Gobo 3 (Limbo)
	004	Gobo 4 (Up Is Down)
	005	Gobo 5 (Brush Up)
	006	Gobo 6 (Sponge)
	007	Gobo 7 (All Wrapped Up)
	008-127	No function
	128-136	Shake Gobo 1, 360° → 10°
	137-145	Shake Gobo 2, 360° → 10°
	146-154	Shake Gobo 3, 360° → 10°
	155-163	Shake Gobo 4, 360° → 10°
	164-172	Shake Gobo 5, 360° → 10°
	173-181	Shake Gobo 6, 360° → 10°
	182-190	Shake Gobo 7, 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
19		**Gobo wheel 2 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
20	000-255	**Gobo wheel 2 indexing/rotation (16-bit fine)** · Fine control (interpolation)
21		**Animation wheel insertion**
	000	Open
	001	Horizontal pattern
	002	Diagonal pattern

64CH (EXTENDED)	VALUE	FUNCTION
	003	Vertical pattern
	004-023	No function
	024	Open
	025-074	Wheel insertion
	075	Horizontal pattern
	076-126	Diagonal patterns
	127	Vertical pattern
	128-148	Horizontal pattern shake slow → fast
	149-169	Diagonal pattern shake slow → fast
	170-190	Vertical pattern shake slow → fast
	191	No function
	192	Stop (wheel stops at current position)
	193-239	Bounce between horizontal and vertical slow → fast
	240	Stop (wheel stops at current pattern)
	241-255	Random patterns between horizontal and vertical slow → fast
22		**Animation wheel indexing/rotation (16-bit coarse)**
	000-063	Wheel indexing -180° → 0°
	064	Wheel indexed at 0°
	065-127	Wheel indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (wheel stops at current position)
	193-255	CCW rotation slow → fast
23	000-255	**Animation wheel indexing/rotation (16-bit fine)** · Fine control (interpolation)
24	000-255	**Light Frost (Frost 1)** · No frost → full frost
25	000-255	**Heavy Frost (Frost 2)** · No frost → full frost
26		**Prism selection**
	000	Open
	001	Prism 1
	002-127	No function
	128-191	Shake prism slow → fast
	192-255	No function
27		**Prism indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Prism indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (prism stops at current position)
	193-255	CCW rotation slow → fast
28	000-255	**Prism indexing/rotation (16-bit fine)** · Fine control (interpolation)
29		**Iris (16-bit coarse)**
	000-191	Open → closed

64CH (EXTENDED)	VALUE	FUNCTION
	192	Stop (iris stops at current position)
	193-223	Opening pulse slow → fast
	224	Stop (iris stops at current position)
	225-255	Closing pulse slow → fast
30	000-255	**Iris (16-bit fine)** · Fine control (interpolation)
31	000-255	**Zoom (16-bit coarse)** · Wide → narrow
32	000-255	**Zoom (16-bit fine)** · Fine control (interpolation)
33	000-255	**Focus (16-bit coarse)** · Infinity → Near
34	000-255	**Focus (16-bit fine)** · Fine control (interpolation)
35	000-255	**Framing blade 1 position (16-bit coarse)** · Out → in
36	000-255	**Framing blade 1 position (16-bit fine)** · Fine control (interpolation)
37		**Framing blade 1 angle (16-bit coarse)**
	000-127	Minimum
	128	Parallel
	129-255	Maximum
38	000-255	**Framing blade 1 angle (16-bit fine)** · Fine control (interpolation)
39	000-255	**Framing blade 2 position (16-bit coarse)** · Out → in
40	000-255	**Framing blade 2 position (16-bit fine)** · Fine control (interpolation)
41		**Framing blade 2 angle (16-bit coarse)**
	000-127	Minimum
	128	Parallel
	129-255	Maximum
42	000-255	**Framing blade 2 angle (16-bit fine)** · Fine control (interpolation)
43	000-255	**Framing blade 3 position (16-bit coarse)** · Out → in
44	000-255	**Framing blade 3 position (16-bit fine)** · Fine control (interpolation)
45		**Framing blade 3 angle (16-bit coarse)**
	000-127	Minimum
	128	Parallel
	129-255	Maximum
46	000-255	**Framing blade 3 angle (16-bit fine)** · Fine control (interpolation)
47	000-255	**Framing blade 4 position (16-bit coarse)** · Out → in
48	000-255	**Framing blade 4 position (16-bit fine)** · Fine control (interpolation)
49		**Framing blade 4 angle (16-bit coarse)**
	000-127	Minimum
	128	Parallel
	129-255	Maximum
50	000-255	**Framing blade 4 angle (16-bit fine)** · Fine control (interpolation)
51		**Framing rotation (16-bit coarse)**
	000-127	Minimum
	128	Parallel

64CH (EXTENDED)	VALUE	FUNCTION
	129-255	Maximum
52	000-255	**Framing rotation (16-bit fine)** · Fine control (interpolation)
53	000-255	**Pan (16-bit coarse)** · Left → right
54	000-255	**Pan (16-bit fine)** · Fine control (interpolation)
55	000-255	**Tilt (16-bit coarse)** · Forward → backward
56	000-255	**Tilt (16-bit fine)** · Fine control (interpolation)
57		**Fixture Control/Settings**
	000-009	No function
	010-014	Reset fixture (5 sec.)
	015	No function
	016	Reset color (5 sec.)
	017	Reset beam (5 sec.)
	018	Reset pan and tilt (5 sec.)
	019-022	No function
	023	Linear dimmer curve (1 sec.)
	024	Square law dimmer curve (default, 1 sec.)
	025	Inverse square law dimmer curve (1 sec.)
	026	S-Curve dimmer curve (1 sec.)
	027	Pan and tilt speed = Standard (default, 1 sec.)
	028	Pan and tilt speed = Fast (1 sec.)
	029	Pan and tilt speed = Smooth (1 sec.)
	030	Effect shortcuts = ON (default, 1 sec.)
	031	Effect shortcuts = OFF (1 sec.)
	032	Disable focus tracking (1 sec.)
	033	Enable focus tracking at near distance (1 sec.)
	034	Enable focus tracking at medium distance (default, 1 sec.)
	035	Enable focus tracking at far distance (1 sec.)
	036	Enable video tracking (1 sec.)
	037	Disable video tracking (default, 1 sec.)
	038	Extended gamut mode (1 sec.)
	039	Calibrated color mode (1 sec.)
	040	Direct color mode (default, 1 sec.)
	041-051	No function
	052	Control panel display = ON (default, 1 sec.)
	053	Control panel display = OFF
	054	Regulated fan speed, fixed light output intensity (default, 1 sec.)
	055	Full fan speed, regulated light output intensity (1 sec.)
	056	Medium fan speed, regulated light output intensity (1 sec.)
	057	Low fan speed, regulated light output intensity (1 sec.)
	058	Ultra-low fan speed, regulated light output intensity (1 sec.)
	059-060	No function

64CH (EXTENDED)	VALUE	FUNCTION
	061	Hibernation = ON (1 sec.)
	062	Hibernation = OFF (default, 1 sec.)
	063	Followspot = ON (1 sec.)
	064	Followspot = OFF (default, 1 sec.)
	065	Pan tilt limit = ON (1 sec.)
	066	Pan tilt limit = OFF (default, 1 sec.)
	067	Store lower pan limit (1 sec.)
	068	Store upper pan limit (1 sec.)
	069	Store lower tilt limit (1 sec.)
	070	Store upper tilt limit (1 sec.)
	071	Reset pan tilt limits (1 sec.)
	072	Tungsten emulation = ON (1 sec.)
	073	Tungsten emulation = OFF (default, 1 sec.)
	074	Stand-alone: Record current look (5 sec.)
	075	Offline mode = Run stand-alone show (5 sec.)
	076	Offline mode = Hold last look (default, 5 sec.)
	077-078	No function
	079	Enable gobo CT correction (default, 1 sec.)
	080	Disable gobo CT correction (1 sec.)
	081-083	No function
	084	Studio mode 2 (1 sec.)
	085	Studio mode 1 (1 sec.)
	086	Studio mode = OFF (default, 1 sec.)
	087	Disable keylight calibration (1 sec.)
	088	Keylight calibration manual (1 sec.)
	089	Keylight calibration automatic (default, 1 sec.)
	090-093	No function
	094	Standard framing mode
	095	Legacy framing mode
	096-099	No function
	100	Enable calibration (5 sec.)
	101	Store pan and tilt calibration (5 sec.)
	102	No function
	103	Store Cyan calibration (5 sec.)
	104	Store Magenta calibration (5 sec.)
	105	Store Yellow calibration (5 sec.)
	106	Store CTO calibration (5 sec.)
	107	Store all CMYC calibration (5 sec.)
	108	Store Rotating Gobo 1 / Current slot index calibration (5 sec.)
	109	Store Rotating Gobo 2 / Current slot index calibration (5 sec.)
	110	No function

64CH (EXTENDED)	VALUE	FUNCTION
	111	Store beam effect/framing calibration (5 sec.)
	112	Store iris calibration (5 sec.)
	113	Store focus calibration (5 sec.)
	114	Store zoom calibration (5 sec.)
	115	Store color wheel calibration (5 sec.)
	116-191	No function
	192	Start CTB filter keylight calibration (5 sec.)
	193	Store CTB filter keylight calibration (5 sec.)
	194	Start CTO flag keylight calibration (5 sec.)
	195	Start Spectral Enhancement filter keylight calibration (5 sec.)
	196	Store CTO flag keylight calibration (5 sec.)
	197	Store Spectral Enhancement filter keylight calibration (5 sec.)
	198	Store all calibration values except keylight calibration (5 sec.)
	199	Reset all calibration values to factory default (excluding keylight calibration, CTC and Tint, 5 sec.)
	200-209	No function
	210	Outdoor: Stop actions and return to normal operation
	211	No function
	212	Outdoor: Run drying off procedure (1 sec., stops when sequence is complete, or stop by sending value 210)
	213	Outdoor: Head goes immediately to safe parking position (1 sec., return to normal operation by sending value 210)
	214-255	No function
58		**LED Frequency**
	000	Hybrid dimming
	001-127	Variable -2% → 0%
	128	2400 Hz
	129-254	Variable 0% → +2%
	255	No function
59		**P3 Mix**
	000-026	DMX Mode: Intensity and colors fully controlled by DMX, P3 pixel data ignored
	027-228	Mixed Mode: crossfade from DMX control of intensity and colors to P3 control of intensity and colors (at 27 fully DMX; at 228 the intensity of each of the 6 x Animotion segments is controlled by 6 x separate P3 pixels and color is controlled using the average color of the six P3 pixels)
	229-255	Video Mode: intensity of 6 x Animotion segments controlled by 6 x P3 pixels, color controlled by DMX (DMX channels 'color' the P3 pixel data)
60		**FX 1 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe

64CH (EXTENDED)	VALUE	FUNCTION
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step

64CH (EXTENDED)	VALUE	FUNCTION
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock

64CH (EXTENDED)	VALUE	FUNCTION
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	No function (FX160 is FX2 Select only)
	161	Vertical Bar Slim
	162	Vertical Bar Medium
	163	Vertical Bar Large
	164	Horizontal Bar Slim
	165	Horizontal Bar Medium
	166	Horizontal Bar Large
	167	Small Square
	168	Medium Square
	169	Large Square
	170	Small Horizontal Rectangle
	171	Medium Horizontal Rectangle
	172	Large Horizontal Rectangle
	173	Small Vertical Rectangle
	174	Medium Vertical Rectangle
	175	Large Vertical Rectangle
	176	Small Parallelogram Left
	177	Medium Parallelogram Left
	178	Small Parallelogram Right
	179	Medium Parallelogram Right
	180	Vertical Bar Slim to Horizontal Bar Slim
	181	Vertical Bar Medium to Horizontal Bar Medium
	182	Vertical Bar Large to Horizontal Bar Large
	183	Vertical Bar Slim to Medium Square
	184	Vertical Bar Medium to Medium Square
	185	Horizontal Bar Slim to Medium Square
	186	Horizontal Bar Medium to Medium Square
	187	Medium Square to Medium Horizontal Rectangle
	188	Medium Square to Medium Vertical Rectangle
	189	Medium Square to Large Horizontal Rectangle
	190	Medium Square to Large Vertical Rectangle
	191	Small Square to Small Parallelogram Left
	192	Medium Square to Medium Parallelogram Left
	193	Small Square to Small Parallelogram Right

64CH (EXTENDED)	VALUE	FUNCTION
	194	Medium Square to Medium Parallelogram Right
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function
61		**FX 1 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
62		**FX 2 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers

64CH (EXTENDED)	VALUE	FUNCTION
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function

64CH (EXTENDED)	VALUE	FUNCTION
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	Enables y-axis selection for FX 167-194 (changes function of the adjacent FX2 Adjust channel)
	161-194	No function (FX 161-194 are FX1 Select only)
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium

64CH (EXTENDED)	VALUE	FUNCTION
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function
63		**FX 2 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
64		**FX Synchronization**
	000	No sync
	001-035	Fixture offset (shift 10° → 350°)
	036	Synchronized
	037-100	No function
	101-120	Random start (FX1 adjust channel controls overall speed)
	121-140	Random duration
	141-255	No function

Ludicrous DMX Mode

70CH (LUDICROUS)	VALUE	FUNCTION
1		**Strobe/shutter**
	000-019	Shutter closed
	020-049	Shutter open
	050-200	Strobe slow → fast
	201-210	Shutter open
	211-255	Random strobe slow → fast
2	000-255	**Dimmer (16-bit coarse)** · Closed → Open
3	000-255	**Dimmer (16-bit fine)** · Fine control (interpolation)
4	000-255	**Cyan (16-bit coarse)** · Intensity 0 → 100%
5	000-255	**Cyan (16-bit fine)** · Fine control (interpolation)
6	000-255	**Magenta (16-bit coarse)** · Intensity 0 → 100%
7	000-255	**Magenta (16-bit fine)** · Fine control (interpolation)
8	000-255	**Yellow (16-bit coarse)** · Intensity 0 → 100%
9	000-255	**Yellow (16-bit fine)** · Fine control (interpolation)
10	000-255	**CTO (16-bit coarse)** · Open (5800 K) → Warm (2850 K)
11	000-255	**CTO (16-bit fine)** · Fine control (interpolation)
12		**CTC (Color Temperature Control)**

70CH (LUDICROUS)	VALUE	FUNCTION
	000-037	2000 K
	038-113	2000 K → 5750 K
	114	Open (5800 K)
	115-255	5850 K → 12850 K
13		**Green/Magenta shift (tint)**
	000-126	Shift from Magenta / negative Duv to no shift
	127-128	No shift (native / on black body curve)
	129-255	Shift towards Green / positive Duv
14		**Color wheel**
	000	Open
	001	Slot 1 (Spectral Enhancement)
	002	Slot 2 (CTB)
	003	Slot 3 (Deep Orange)
	004	Slot 4 (Navy Blue)
	005	Slot 5 (Red)
	006-023	No function
	024	Open
	025-040	Open → Slot 1
	041	Slot 1
	042-057	Slot 1 → Slot 2
	058	Slot 2
	059-074	Slot 2 → Slot 3
	075	Slot 3
	076-091	Slot 3 → Slot 4
	092	Slot 4
	093-108	Slot 4 → Slot 5
	109	Slot 5
	110-125	Slot 5 → Open
	126	Open
	127	No function
	128-137	Shake around Open 360° → 10°
	138-147	Shake around Slot 1 360° → 10°
	148-157	Shake around Slot 2 360° → 10°
	158-167	Shake around Slot 3 360° → 10°
	168-177	Shake around Slot 4 360° → 10°
	178-187	Shake around Slot 5 360° → 10°
	188-191	No function
	192-214	CW rotation fast → slow
	215-216	Stop (wheel stops at current position)
	217-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected color)

70CH (LUDICROUS)	VALUE	FUNCTION
	241-255	Random color slow → fast
15		**Gobo wheel 1 gobo selection**
	000	Open
	001	Gobo 1 (Time Ripples)
	002	Gobo 2 (Look Sharper)
	003	Gobo 3 (Compass)
	004	Gobo 4 (Deep Space)
	005	Gobo 5 (Radar)
	006	Gobo 6 (Short Cuts)
	007	Gobo 7 (A Lot of Spot)
	008-127	No function
	128-136	Shake Gobo 1, 360° → 10°
	137-145	Shake Gobo 2, 360° → 10°
	146-154	Shake Gobo 3, 360° → 10°
	155-163	Shake Gobo 4, 360° → 10°
	164-172	Shake Gobo 5, 360° → 10°
	173-181	Shake Gobo 6, 360° → 10°
	182-190	Shake Gobo 7, 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
16		**Gobo wheel 1 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
17	000-255	**Gobo wheel 1 indexing/rotation (16-bit fine)** · Fine control (interpolation)
18		**Gobo wheel 2 gobo selection**
	000	Open
	001	Gobo 1 (String Theory)
	002	Gobo 2 (Hazey Waves)
	003	Gobo 3 (Limbo)
	004	Gobo 4 (Up Is Down)
	005	Gobo 5 (Brush Up)
	006	Gobo 6 (Sponge)
	007	Gobo 7 (All Wrapped Up)
	008-127	No function

70CH (LUDICROUS)	VALUE	FUNCTION
	128-136	Shake Gobo 1, 360° → 10°
	137-145	Shake Gobo 2, 360° → 10°
	146-154	Shake Gobo 3, 360° → 10°
	155-163	Shake Gobo 4, 360° → 10°
	164-172	Shake Gobo 5, 360° → 10°
	173-181	Shake Gobo 6, 360° → 10°
	182-190	Shake Gobo 7, 360° → 10°
	191	No function
	192-215	CW rotation fast → slow
	216-239	CCW rotation slow → fast
	240	Stop (wheel stops at currently selected gobo)
	241-255	Random gobo slow → fast
19		**Gobo wheel 2 indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (rotation stops at current position)
	193-255	CCW rotation slow → fast
20	000-255	**Gobo wheel 2 indexing/rotation (16-bit fine)** · Fine control (interpolation)
21		**Animation wheel insertion**
	000	Open
	001	Horizontal pattern
	002	Diagonal pattern
	003	Vertical pattern
	004-023	No function
	024	Open
	025-074	Wheel insertion
	075	Horizontal pattern
	076-126	Diagonal patterns
	127	Vertical pattern
	128-148	Horizontal pattern shake slow → fast
	149-169	Diagonal pattern shake slow → fast
	170-190	Vertical pattern shake slow → fast
	191	No function
	192	Stop (wheel stops at current position)
	193-239	Bounce between horizontal and vertical slow → fast
	240	Stop (wheel stops at current pattern)
	241-255	Random patterns between horizontal and vertical slow → fast
22		**Animation wheel indexing/rotation (16-bit coarse)**
	000-063	Wheel indexing -180° → 0°

70CH (LUDICROUS)	VALUE	FUNCTION
	064	Wheel indexed at 0°
	065-127	Wheel indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (wheel stops at current position)
	193-255	CCW rotation slow → fast
23	000-255	**Animation wheel indexing/rotation (16-bit fine)** · Fine control (interpolation)
24	000-255	**Light Frost (Frost 1)** · No frost → full frost
25	000-255	**Heavy Frost (Frost 2)** · No frost → full frost
26		**Prism selection**
	000	Open
	001	Prism 1
	002-127	No function
	128-191	Shake prism slow → fast
	192-255	No function
27		**Prism indexing/rotation (16-bit coarse)**
	000-063	Indexing -180° → 0°
	064	Prism indexed at 0°
	065-127	Indexing 0° → +180°
	128-191	CW rotation fast → slow
	192	Stop (prism stops at current position)
	193-255	CCW rotation slow → fast
28	000-255	**Prism indexing/rotation (16-bit fine)** · Fine control (interpolation)
29		**Iris (16-bit coarse)**
	000-191	Open → closed
	192	Stop (iris stops at current position)
	193-223	Opening pulse slow → fast
	224	Stop (iris stops at current position)
	225-255	Closing pulse slow → fast
30	000-255	**Iris (16-bit fine)** · Fine control (interpolation)
31	000-255	**Zoom (16-bit coarse)** · Wide → narrow
32	000-255	**Zoom (16-bit fine)** · Fine control (interpolation)
33	000-255	**Focus (16-bit coarse)** · Infinity → Near
34	000-255	**Focus (16-bit fine)** · Fine control (interpolation)
35	000-255	**Framing blade 1 position (16-bit coarse)** · Out → in
36	000-255	**Framing blade 1 position (16-bit fine)** · Fine control (interpolation)
37		**Framing blade 1 angle (16-bit coarse)**
	000-127	Minimum
	128	Parallel
	129-255	Maximum
38	000-255	**Framing blade 1 angle (16-bit fine)** · Fine control (interpolation)

70CH (LUDICROUS)	VALUE	FUNCTION
39	000–255	**Framing blade 2 position (16-bit coarse)** · Out → in
40	000–255	**Framing blade 2 position (16-bit fine)** · Fine control (interpolation)
41		**Framing blade 2 angle (16-bit coarse)**
	000–127	Minimum
	128	Parallel
	129–255	Maximum
42	000–255	**Framing blade 2 angle (16-bit fine)** · Fine control (interpolation)
43	000–255	**Framing blade 3 position (16-bit coarse)** · Out → in
44	000–255	**Framing blade 3 position (16-bit fine)** · Fine control (interpolation)
45		**Framing blade 3 angle (16-bit coarse)**
	000–127	Minimum
	128	Parallel
	129–255	Maximum
46	000–255	**Framing blade 3 angle (16-bit fine)** · Fine control (interpolation)
47	000–255	**Framing blade 4 position (16-bit coarse)** · Out → in
48	000–255	**Framing blade 4 position (16-bit fine)** · Fine control (interpolation)
49		**Framing blade 4 angle (16-bit coarse)**
	000–127	Minimum
	128	Parallel
	129–255	Maximum
50	000–255	**Framing blade 4 angle (16-bit fine)** · Fine control (interpolation)
51		**Framing rotation (16-bit coarse)**
	000–127	Minimum
	128	Parallel
	129–255	Maximum
52	000–255	**Framing rotation (16-bit fine)** · Fine control (interpolation)
53	000–255	**Pan (16-bit coarse)** · Left → right
54	000–255	**Pan (16-bit fine)** · Fine control (interpolation)
55	000–255	**Tilt (16-bit coarse)** · Forward → backward
56	000–255	**Tilt (16-bit fine)** · Fine control (interpolation)
57		**Fixture Control/Settings**
	000–009	No function
	010–014	Reset fixture (5 sec.)
	015	No function
	016	Reset color (5 sec.)
	017	Reset beam (5 sec.)
	018	Reset pan and tilt (5 sec.)
	019–022	No function
	023	Linear dimmer curve (1 sec.)
	024	Square law dimmer curve (default, 1 sec.)

70CH (LUDICROUS)	VALUE	FUNCTION
	025	Inverse square law dimmer curve (1 sec.)
	026	S-Curve dimmer curve (1 sec.)
	027	Pan and tilt speed = Standard (default, 1 sec.)
	028	Pan and tilt speed = Fast (1 sec.)
	029	Pan and tilt speed = Smooth (1 sec.)
	030	Effect shortcuts = ON (default, 1 sec.)
	031	Effect shortcuts = OFF (1 sec.)
	032	Disable focus tracking (1 sec.)
	033	Enable focus tracking at near distance (1 sec.)
	034	Enable focus tracking at medium distance (default, 1 sec.)
	035	Enable focus tracking at far distance (1 sec.)
	036	Enable video tracking (1 sec.)
	037	Disable video tracking (default, 1 sec.)
	038	Extended gamut mode (1 sec.)
	039	Calibrated color mode (1 sec.)
	040	Direct color mode (default, 1 sec.)
	041-051	No function
	052	Control panel display = ON (default, 1 sec.)
	053	Control panel display = OFF
	054	Regulated fan speed, fixed light output intensity (default, 1 sec.)
	055	Full fan speed, regulated light output intensity (1 sec.)
	056	Medium fan speed, regulated light output intensity (1 sec.)
	057	Low fan speed, regulated light output intensity (1 sec.)
	058	Ultra-low fan speed, regulated light output intensity (1 sec.)
	059-060	No function
	061	Hibernation = ON (1 sec.)
	062	Hibernation = OFF (default, 1 sec.)
	063	Followspot = ON (1 sec.)
	064	Followspot = OFF (default, 1 sec.)
	065	Pan tilt limit = ON (1 sec.)
	066	Pan tilt limit = OFF (default, 1 sec.)
	067	Store lower pan limit (1 sec.)
	068	Store upper pan limit (1 sec.)
	069	Store lower tilt limit (1 sec.)
	070	Store upper tilt limit (1 sec.)
	071	Reset pan tilt limits (1 sec.)
	072	Tungsten emulation = ON (1 sec.)
	073	Tungsten emulation = OFF (default, 1 sec.)
	074	Stand-alone: Record current look (5 sec.)
	075	Offline mode = Run stand-alone show (5 sec.)
	076	Offline mode = Hold last look (default, 5 sec.)

70CH (LUDICROUS)	VALUE	FUNCTION
	077-078	No function
	079	Enable gobo CT correction (default, 1 sec.)
	080	Disable gobo CT correction (1 sec.)
	081-083	No function
	084	Studio mode 2 (1 sec.)
	085	Studio mode 1 (1 sec.)
	086	Studio mode = OFF (default, 1 sec.)
	087	Disable keylight calibration (1 sec.)
	088	Keylight calibration manual (1 sec.)
	089	Keylight calibration automatic (default, 1 sec.)
	090-093	No function
	094	Standard framing mode
	095	Legacy framing mode
	096-099	No function
	100	Enable calibration (5 sec.)
	101	Store pan and tilt calibration (5 sec.)
	102	No function
	103	Store Cyan calibration (5 sec.)
	104	Store Magenta calibration (5 sec.)
	105	Store Yellow calibration (5 sec.)
	106	Store CTO calibration (5 sec.)
	107	Store all CMYC calibration (5 sec.)
	108	Store Rotating Gobo 1 / Current slot index calibration (5 sec.)
	109	Store Rotating Gobo 2 / Current slot index calibration (5 sec.)
	110	No function
	111	Store beam effect/framing calibration (5 sec.)
	112	Store iris calibration (5 sec.)
	113	Store focus calibration (5 sec.)
	114	Store zoom calibration (5 sec.)
	115	Store color wheel calibration (5 sec.)
	116-191	No function
	192	Start CTB filter keylight calibration (5 sec.)
	193	Store CTB filter keylight calibration (5 sec.)
	194	Start CTO flag keylight calibration (5 sec.)
	195	Start Spectral Enhancement filter keylight calibration (5 sec.)
	196	Store CTO flag keylight calibration (5 sec.)
	197	Store Spectral Enhancement filter keylight calibration (5 sec.)
	198	Store all calibration values except keylight calibration (5 sec.)
	199	Reset all calibration values to factory default (excluding keylight calibration, CTC and Tint, 5 sec.)
	200-209	No function

70CH (LUDICROUS)	VALUE	FUNCTION
	210	Outdoor: Stop actions and return to normal operation
	211	No function
	212	Outdoor: Run drying off procedure (1 sec., stops when sequence is complete, or stop by sending value 210)
	213	Outdoor: Head goes immediately to safe parking position (1 sec., return to normal operation by sending value 210)
	214-255	No function
58		**LED Frequency**
	000	Hybrid dimming
	001-127	Variable -2% → 0%
	128	2400 Hz
	129-254	Variable 0% → +2%
	255	No function
59		**P3 Mix**
	000-026	DMX Mode: Intensity and colors fully controlled by DMX, P3 pixel data ignored
	027-228	Mixed Mode: crossfade from DMX control of intensity and colors to P3 control of intensity and colors (at 27 fully DMX; at 228 the intensity of each of the 6 x Animotion segments is controlled by 6 x separate P3 pixels and color is controlled using the average color of the six P3 pixels)
	229-255	Video Mode: intensity of 6 x Animotion segments controlled by 6 x P3 pixels, color controlled by DMX (DMX channels 'color' the P3 pixel data)
60		**FX 1 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers

70CH (LUDICROUS)	VALUE	FUNCTION
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function

70CH (LUDICROUS)	VALUE	FUNCTION
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	No function (FX160 is FX2 Select only)
	161	Vertical Bar Slim
	162	Vertical Bar Medium
	163	Vertical Bar Large
	164	Horizontal Bar Slim
	165	Horizontal Bar Medium
	166	Horizontal Bar Large
	167	Small Square

70CH (LUDICROUS)	VALUE	FUNCTION
	168	Medium Square
	169	Large Square
	170	Small Horizontal Rectangle
	171	Medium Horizontal Rectangle
	172	Large Horizontal Rectangle
	173	Small Vertical Rectangle
	174	Medium Vertical Rectangle
	175	Large Vertical Rectangle
	176	Small Parallelogram Left
	177	Medium Parallelogram Left
	178	Small Parallelogram Right
	179	Medium Parallelogram Right
	180	Vertical Bar Slim to Horizontal Bar Slim
	181	Vertical Bar Medium to Horizontal Bar Medium
	182	Vertical Bar Large to Horizontal Bar Large
	183	Vertical Bar Slim to Medium Square
	184	Vertical Bar Medium to Medium Square
	185	Horizontal Bar Slim to Medium Square
	186	Horizontal Bar Medium to Medium Square
	187	Medium Square to Medium Horizontal Rectangle
	188	Medium Square to Medium Vertical Rectangle
	189	Medium Square to Large Horizontal Rectangle
	190	Medium Square to Large Vertical Rectangle
	191	Small Square to Small Parallelogram Left
	192	Medium Square to Medium Parallelogram Left
	193	Small Square to Small Parallelogram Right
	194	Medium Square to Medium Parallelogram Right
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function

70CH (LUDICROUS)	VALUE	FUNCTION
61		**FX 1 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
62		**FX 2 Select**
	000	No FX
	001	Strobe Pulse Width (when Strobe is activated on Channel 1)
	002	Wave (sine wave)
	003	Step (50/50 on/off)
	004	Pulse
	005	Blackout Strobe
	006	2x Strobe
	007	3x Strobe
	008	4x Strobe
	009	Up, Down, Flash
	010	Up, Flash, Down, Flash
	011	Random Levels
	012	Electric Arc
	013	Atomic Lighting
	014	Thunderstorm
	015	Welding
	016-031	No function
	032	Stop Motion
	033	Movie Flicker
	034	Random Dimmers
	035	Shakey Dimmers
	036	Negative Pulse
	037	Positive Pulse
	038	Radar Wave
	039	Radar Step
	040	Radar Pulse
	041	Odd/Even Wave
	042	Odd/Even Step
	043	Odd/Even Pulse
	044	5-Step Wave
	045	5-Step Step
	046	5-Step Pulse
	047-063	No function
	064	Rainbow Wave
	065	Rainbow Step
	066	Rainbow Pulse

70CH (LUDICROUS)	VALUE	FUNCTION
	067	RGB Wave
	068	RGB Step
	069	RGB Pulse
	070	CMY Wave
	071	CMY Step
	072	CMY Pulse
	073	Mix to White Wave
	074	Mix to White Step
	075	Mix to White Pulse
	076	Random Mix Wave
	077	Random Mix Step
	078	Random Mix Pulse
	079	Random Subtle Wave
	080	Red-White-Blue Fade
	081	Red-White-Blue Snaps
	082	Full Bumps
	083	All Bumps
	084	Split Bumps
	085	Random Split Bumps
	086	Color Shaker
	087	Fire
	088	Water
	089	Ice
	090	Hot and Cold
	091	Warm and Fuzzy
	092-095	No function
	096	Iris Wave (sine wave)
	097	Iris Step (50/50 on/off)
	098	Iris Pulse
	099	Zoom Wave (sine wave, keeps current speed mode)
	100	Zoom Step (50/50 on/off, keeps current speed mode)
	101	Zoom Pulse (keeps current speed mode)
	102	Random Size Wave
	103	Random Size Step
	104	Random Size Pulse
	105	Prism Quarter Tick Tock
	106	Prism Half Tick Tock
	107	Prism Full Tick Tock
	108	Beam Splash
	109	Beam Splash Invert
	110	Pin to Flood (keeps current speed mode)

70CH (LUDICROUS)	VALUE	FUNCTION
	111-127	No function
	128	Gobo 1 Tick Tick Tick
	129	Gobo 1 Quarter Tick Tock
	130	Gobo 1 Half Tick Tock
	131	Gobo 1 Full Tick Tock
	132	Gobo 1 Fade Spin Zoom
	133	Gobo 1 Twist
	134	Gobo 1 Expand Twist
	135	Gobo 1 Collapse Twist
	136	Gobo 2 Tick Tick Tick
	137	Gobo 2 Quarter Tick Tock
	138	Gobo 2 Half Tick Tock
	139	Gobo 2 Full Tick Tock
	140	Gobo 2 Fade Spin Zoom
	141	Gobo 2 Twist
	142	Gobo 2 Expand Twist
	143	Gobo 2 Collapse Twist
	144-159	No function
	160	Enables y-axis selection for FX 167-194 (changes function of the adjacent FX2 Adjust channel)
	161-194	No function (FX 161-194 are FX1 Select only)
	195-223	No function
	224	Pan and Tilt Circle Small
	225	Pan and Tilt Circle Medium
	226	Pan and Tilt Circle Large
	227	Pan and Tilt Figure 8 Small
	228	Pan and Tilt Figure 8 Medium
	229	Pan and Tilt Figure 8 Large
	230	Pan and Tilt Diagonal Line Small
	231	Pan and Tilt Diagonal Line Medium
	232	Pan and Tilt Diagonal Line Large
	233	Pan and Tilt Square Small
	234	Pan and Tilt Square Medium
	235	Pan and Tilt Square Large
	236-255	No function
63		**FX 2 Adjust**
	000-126	Backwards fast → slow
	127-128	Stop
	129-255	Forwards slow → fast
64		**FX Synchronization**
	000	No sync
	001-035	Fixture offset (shift 10° → 350°)

70CH (LUDICROUS)	VALUE	FUNCTION
	036	Synchronized
	037-100	No function
	101-120	Random start (FX1 adjust channel controls overall speed)
	121-140	Random duration
	141-255	No function
65	000-255	**Intensity LED Segment 1** · 0 → 100%
66	000-255	**Intensity LED Segment 2** · 0 → 100%
67	000-255	**Intensity LED Segment 3** · 0 → 100%
68	000-255	**Intensity LED Segment 4** · 0 → 100%
69	000-255	**Intensity LED Segment 5** · 0 → 100%
70	000-255	**Intensity LED Segment 6** · 0 → 100%

※ 16-bit (coarse/fine) channels are shown in the source as a single DMX Value range of 0–65535 spanning two channels; here each is split into a coarse row (value semantics, 8-bit 000-255) and a fine row (continuous interpolation). Set fine to 000 to reproduce a stated coarse value.

※ Fixture Control/Settings commands must be held for the number of seconds shown after each command.

※ FX 161–194 (framing shapes) are selectable on the FX 1 Select channel only; FX 160 (y-axis enable) is on the FX 2 Select channel only.

※ Compact DMX Mode (firmware 1.4.0+) is identical to Basic DMX Mode with the P3 Mix and FX channels (Basic ch 49–54) removed, giving a 48-channel footprint.